

TAKAHASHI *et al.*, 09/811,606
Suppl. Amdt. filed 12 August 2004
Responsive to Ex. Intv. of 11 August 2004

520.39871X00/NT0318US1
Page 10

REMARKS

This Supplemental Amendment and Statement of Substance is responsive to the Examiner Interview identified above, and in any other manner indicated below.

EXAMINER INTERVIEW ACKNOWLEDGED/STATEMENT OF SUBSTANCE

This paper is responsive to the Examiner Interview conducted 11 August 2004 for the present application by and between (as indicated on the Interview Summary) Primary Examiner Julie Anne Watko and attorney Paul J. Skwlerawski. More particularly, any foregoing amendments may include amendments discussed during, or resultant from, the Examiner Interview, and the following includes a reiteration of discussions/arguments had during the Examiner Interview.

PENDING CLAIMS

Claims 1-6, 15-17 and 21-26 were pending, and Claim 22 was under consideration and subject to examination in the most-recent Office Action. Appropriate claims have been amended and/or added (without prejudice or disclaimer) in order to adjust a clarity and/or focus of Applicant's claimed invention. That is, such changes are unrelated to any prior art or scope adjustment and are simply refocused claims in which Applicant is presently interested. At entry of this paper, Claims 1-6, 15-17 and 21-33 are pending for further consideration and examination in the application.

TAKAHASHI *et al.*, 09/811,606
Suppl. Amdt. filed 12 August 2004
Responsive to Ex. Intv. of 11 August 2004

520.39871X00/NT0318US1
Page 11

REJECTION UNDER §112, 2ND PARAGRAPH - TRAVERSED

Applicant stands by, reiterates and incorporates herein by reference the comments/arguments set forth within the Remarks portion in Applicant's prior 21 May 2004 Amendment.

WITHDRAWAL OF FURTHER CLAIMS FROM CONSIDERATION - TRAVERSED

Applicant stands by, reiterates and incorporates herein by reference the comments/arguments set forth within the Remarks portion in Applicant's prior 21 May 2004 Amendment. Applicant especially re-stresses that "granular" material is useable with either of Applicant's FIG. 6 or FIG. 7 species, as clearly taught at, e.g., page 7, lines 22-25 (see also page 7, line 22 through page 9, line 23) of the specification, *i.e.*, the material of the magnetic control layer is either (1) a magnetic oxide having a spinel lattice; or (2) a granular magnetic material made of a hard magnetic metal material and a non-magnetic insulating material. Such materials are described at page 7 of the original specification as being alternative equivalents, and thus, the granular arrangement is clearly applicable to the magnetic domain control layer in FIG. 6.

In any event, the word "granular" has been removed from the independent claims so as to broaden such claims (*i.e.*, such feature/limitation is believed unnecessary to distinguish over the art of record), and instead new dependent Claims 27-31 reintroduce the "granular" feature/limitations.

As further argument, Independent Claim 22 was considered within the scope of Applicant's election and was examined within the Office Action, while Independent

TAKAHASHI *et al.*, 09/811,606
Suppl. Amdt. filed 12 August 2004
Responsive to Ex. Intv. of 11 August 2004

520.39871X00/NT0318US1
Page 12

Claim 23 (which was very similar to claim 22) was not. The close resemblance of independent Claim 23 (and claims dependent therefrom) to Claim 22 is respectfully noted, and it is respectfully requested that Claims 23 (and claims dependent therefrom) be examined as being within the scope of the election.

Based on the foregoing, reconsideration and withdrawal of the improper withdrawal of ones of Applicant's claims, are respectfully requested.

REJECTION UNDER 35 USC §102

Applicant stands by, reiterates and incorporates herein by reference the comments/arguments set forth within the Remarks portion in Applicant's prior 21 May 2004 Amendment. As additional remarks to preclude any further §§102 or 103 rejection, Applicant respectfully submits the following.

Regarding Independent Claims 1, 21 and 26 (and claims dependent therefrom), Applicant and the undersigned respectfully traverse the Examiner's apparent mischaracterization of Fontana, Jr. *et al.*'s layers 150/160 (in combination) as "magnetic domain control layers," to allegedly meet Applicant's prior claims. More particularly, any skilled artisan would agree that such is a mischaracterization, and that Fontana, Jr. *et al.*'s "insulating layer 160" is **NOT PART** of Fontana, Jr. *et al.*'s "biasing ferromagnetic layer 150." In any event, Applicant's Independent Claims 1, 21 and 26 have been further clarified such that there are separate magnetic domain control layers on opposite sides of the MR layer, with "each magnetic domain control layer including at least two of the regions of hard magnetic material which are separated from one another." For example, regions (e.g., layers) of hard magnetic

TAKAHASHI *et al.*, 09/811,606
Suppl. Amdt. filed 12 August 2004
Responsive to Ex. Intv. of 11 August 2004

520.39871X00/NT0318US1
Page 13

material are separated by inter-dispersed insulating material. Fontana, Jr. *et al.* clearly does not illustrate or describe its "biasing ferromagnetic layer 150" in contact with the MR layer, and further, clearly illustrates and describes only one "biasing ferromagnetic layer 150" in each of Fontana, Jr. *et al.*'s left or right magnetic domain control layer.

Regarding independent Claims 22 and 23 (and any claims dependent therefrom), Fontana, Jr. *et al.* does not disclose or suggest Applicant's "layer made of a soft magnetic material having high electric resistivity disposed in contact with opposite ends of said magnetoresistive sensor layer, and a hard magnetic layer, disposed outside the soft magnetic material, made of a metal magnetic material having a composition including at least one of the elements of Co (cobalt), Cr (chromium), Pt (platinum), Ta (tantalum), and Nb (niobium)." The Office Action comments "see [Fontana, Jr. *et al.*'s] paragraph 13, which teaches alumina and silica" in support of Fontana, Jr. *et al.* allegedly meeting Applicant's prior "soft magnetic oxide material," appears to be premised on meeting the "oxide" limitation. However, "oxide" was a typographical error within Claim 22, and Claim 22 has now been amended to correctly recite "soft magnetic material." While Fontana, Jr. *et al.* may disclose a hard magnetic layer (e.g., 150), Fontana, Jr. *et al.* has no arrangement disclosing or suggesting a soft magnetic material. Such distinguishing feature/arguments apply equally as well for independent Claim 23.

Based on the foregoing, reconsideration and withdrawal of the prior art rejection of ones of Applicant's claims, are respectfully requested.

TAKAHASHI *et al.*, 09/811,606
Suppl. Amdt. filed 12 August 2004
Responsive to Ex. Intv. of 11 August 2004

520.39871X00/NT0318US1
Page 14

RESERVATION OF RIGHTS

It is respectfully submitted that any and all claim amendments and/or cancellations submitted within this paper and throughout prosecution of the present application are without prejudice or disclaimer. That is, any above statements, or any present amendment or cancellation of claims (all made without prejudice or disclaimer), should not be taken as an indication or admission that any objection/rejection was valid, or as a disclaimer of any scope or subject matter. Applicant respectfully reserves all rights to file subsequent related application(s) (including reissue applications) directed to any/all previously claimed limitations/features which have been subsequently amended or cancelled, or to any/all limitations/features not yet claimed, *i.e.*, Applicant continues (indefinitely) to maintain no intention or desire to dedicate or surrender any limitations/features of subject matter of the present application to the public.

EXAMINER INVITED TO TELEPHONE

The Examiner is invited to telephone the undersigned at the local D.C. area number of 703-312-6600, to discuss an Examiner's Amendment or other suggested action for accelerating prosecution and moving the present application to allowance.

CONCLUSION


In view of the foregoing amendments and remarks, Applicant respectfully submits that the claims listed above as pending in this case are now in condition for allowance. Accordingly, early allowance of such claims is respectfully requested.

TAKAHASHI *et al.*, 09/811,606
Suppl. Amdt. filed 12 August 2004
Responsive to Ex. Intv. of 11 August 2004

520.39871X00/NT0318US1
Page 15

No Petition is required for entry of this paper. To whatever other extent is actually required and appropriate, Applicant petitions for an extension of time under 37 CFR §1.136. Further, no Petition or additional claim fees are required for entry of this paper. Please charge any actual shortage in the fees appropriately due in connection with the filing of this paper to Deposit Account No. 01-2135 (referencing case No. 520.39871X00).

Respectfully submitted,



Paul J. Skwierawski
Registration No. 32,173
ANTONELLI, TERRY, STOUT & KRAUS, LLP
1300 North Seventeenth Street, Suite 1800
Arlington, Virginia 22209-3801, USA
Telephone 703-312-6600
Facsimile 703-312-6666